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TRANSLANGUAGING IN PROSODY TEACHING: BEYOND MONOLINGUAL IDEOLOGY

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Prosody plays an essential role in pronunciation teaching (Anderson-Hsieh, Johnson, & Koehler, 1992; Derwing, Munro, & Wiebe, 1998). However, some L2 English speakers do not use English prosody effectively (Pickering, 2001, Wennerstrom, 1998). In recent years, a number of studies have argued for similarities between the pragmatic functions of Mandarin and English prosody (Chen & Gussenhoven, 2008; Ouyang & Kaiser, 2015), suggesting the possibility of leveraging learners' L1 into prosody teaching. However, research studies investigating the efficacy of cross-linguistic prosody pedagogy are lacking. This study investigates the efficacy of a monolingual (English) metalinguistic awareness enhancement based prosody teaching method (mono-MAET) and a translingual (English and Mandarin) metalinguistic awareness enhancement based prosody teaching method (trans-MAET) by analyzing the pitch height of the sentence stress in L2 English speakers' read aloud speech. The participants who received trans-MAET demonstrated a statistically significant increase in the pitch height of the stressed constituents. This study informs teaching by showing that tapping into similar pragmatic functions across languages can lead to improvement.

INTRODUCTION

Prosody, also commonly referred to as suprasegmentals, includes a variety of speech features including intonation, rhythm, and stress. In the past 30 years, researchers have found that prosody plays a crucial role in pronunciation teaching and learning (Anderson-Hsieh, Johnson, & Koehler, 1992; Celce-Murcia, Brinton, & Goodwin, 2010; Derwing, Munro, & Wiebe, 1998). However, some L2 English speakers fail to exploit English prosody (Pickering, 2001; Wennerstrom, 1998) in communicating meaning, which may lead to some issues. For instance, L2 English speakers may not be able to actively participate in classroom discussions, and students who are native speakers of English may find it difficult to follow and understand the speech of their international teaching assistants.

However, the techniques used in prosody teaching are far from optimal. Reed and Michaud (2015) concluded that classroom pronunciation teaching, including prosody teaching, focuses mostly on imitation, drills, and repetition, which, according to Gilbert (2014), is not ideal as learners do not typically apply what they learned in the classroom in everyday communication. To solve this issue, Reed and Michaud (2015) argued that metalinguistic awareness of the importance and functions of prosody is essential in prosody teaching. However, studies that have investigated the efficacy of metalinguistic awareness based prosody teaching methods are still needed.

Raising learners' metalinguistic awareness of the importance and functions of English prosody, however, may not be sufficient to foster learners' use of English prosody due to the many ways that prosody can affect meaning in discourse. For instance, knowing that a change of sentence

stress can lead to a change in sentence meaning but being uncertain of the word(s) that should be stressed in different sentences, learners may be reluctant to use prosodic patterns because they do not want to be misinterpreted by native speakers of English.

Some researchers suggest that, "productive future avenues of research might involve investigations of the role of cross-language similarity in the learning of prosodic features" (Trofimovich, Kennedy, & Foote, 2015, p. 357). For example, Cruz-Ferreira (1987) talked about positive transfer and stated that, "Listeners are able to refer to general intuitions about the more likely meaning associated with lower and higher pitch." (p.116). This cross-linguistic approach has some advantages. On the one hand, L2 English speakers may no longer consider English prosody "decorative" if they know that they have been using prosody in a similar manner in their L1s. On the other hand, they may feel more confident in using English prosody if they realize that they can positively transfer some prosodic functions/usages from their L1s to English. Research studies investigating and comparing Mandarin and English prosody reveal that there are some similarities between the prosodic features and functions of these two languages (Chen & Gussenhoven, 2008; Ip & Cutler, 2016), suggesting the possibility of leveraging the L1 in Mandarin speakers' English prosody learning. However, research studies surveying the efficacy of cross-linguistic prosody teaching method are still lacking.

Translanguaging approaches assume that multilingual speakers strategically employ different semiotic systems to realize similar functions, supporting the potential advantages of cross-linguistic based prosody teaching. First developed in Welsh by Williams (1996), translanguaging was used as an approach to bilingual education. It was then expanded by the researchers as a theory explaining how bilinguals manage the linguistic resources in their cognitive system (Gracia & Li, 2014; Li, 2011). Mazak (2017) stated that translanguaging "posits that bilinguals do not separate their 'languages' into discrete systems, but rather possess one integrated repertoire of languaging practices from which they draw as they navigate their everyday bilingual worlds" (p. 5). Mazak (2017) further argued that translanguaging is "a pedagogical stance that teachers and students take on that allows them to draw on all of their linguistic and semiotic resources as they teach and learn both language and content material in classrooms" (p. 5).

To address current issues of prosody teaching and to investigate the role of metalinguistic awareness and translanguaging in prosody teaching, this study surveys the efficacy of two prosody teaching methods for the English sentence stress learning of Chinese L2 English speakers. Sentence stress is studied for two reasons. First, variations in sentence stress can shift the meaning or implication of a sentence. For example, in the sentence "She made the wrong decision," if the speaker stresses the word "she", the speaker emphasizes the fact that a particular person, not someone else, made the wrong decision. However, if the speaker stresses the word "wrong," the speaker emphasizes that the decision is not a right decision. Sentence stress is studied also because of a discrepancy in Chinese L2 English speakers' English and Mandarin sentence stress production. On the one hand, researchers have found that Chinese L2 English speakers' English speech is characterized by a flat pitch contour, suggesting the lack of sentence stress (Pickering, 2001). On the other hand, researchers have found that, like English, Mandarin uses sentence stress to signal information structure (Ip & Cutler, 2016).

This study compares a monolingual (English) metalinguistic-awareness enhancement based prosody teaching method (mono-MAET) and an extended translingual (English and Mandarin)

metalinguistic-awareness enhancement based prosody teaching method (trans-MAET) to a control group. The research questions are:

1. How does mono-MAET influence Mandarin speaking L2 English speakers' English prosody production, as measured by the pitch height of sentence stress?
2. How does trans-MAET influence Mandarin speaking L2 English speakers' English prosody production, as measured by the pitch height of sentence stress?

METHOD

This study adopts a pretest, intervention, and posttest design. Fifteen Mandarin-speaking L2 English speakers were randomly assigned to three groups (N=5). In the pretest, the participants were asked to read aloud a passage in front of a computer at a soundproof booth. The passage (see Appendix) was adapted from Hahn (2004). Participants were recorded using a voice recorder Zoom H4N. Before the participants read the passage aloud, they were asked to read through the passage silently, familiarize themselves with the content, and ask the researcher any questions they had. In the intervention phase, the participants were given different treatments. Participants in group 1 received the mono-MAET in English, participants in group 2 received the trans-MAET in both English and Mandarin, and participants in group 3 (the control group) answered interview questions. The intervention phase lasted for approximately 20 minutes. After the intervention, all participants were asked to read aloud the same lecture again.

The instruction materials for group 1 (mono-MAET) and group 2 (trans-MAET) were adapted from Reed & Michaud (2005). The materials were pre-recorded as two lectures by a native speaker of English and a native speaker of Mandarin. The trans-MAET lecture included the content of the mono-MAET and had additional examples in Mandarin, which were the literal translation of the English examples. The lectures were played once to the participants using computer software Praat (Boersma, 2001). The participants were allowed to ask questions while listening to the lectures.

The mono-MAET contained four parts: introduction, diagnostic, analysis, and practice. The concept of English sentence stress was introduced first, followed by a diagnostic task testing participants' ability to identify stressed constituents in a dialogue. The stressed constituents in the diagnostic task dialogue were then analyzed. Finally, the participants were asked to practice the use of English sentence stress using sample sentences provided.

In the introduction phase, the participants were given a brief introduction of English sentence stress. They were told that stressed words in a sentence are longer, louder, and higher in pitch. The participants were then asked to listen to the following set of sentences and identify the stressed word in each sentence.

1. The *teacher* didn't grade your exam.
2. The teacher didn't grade *your* exam.
3. The teacher didn't grade your *exam*.

In the diagnostic phase, the participants were asked to listen to the conversation below and underline the words that they thought should be stressed. The participants then listened to two

native English speakers having the same conversation and compared the words they underlined to the words that the two native English speakers stressed.

A: "Should I get the shirt with buttons or without buttons?"

B: "How about with the buttons?"

A: "Well, should I get the short-sleeved one or the long-sleeved?"

B: "Well, I like short-sleeved shirts."

A: "Okay, do you like the blue or the white?"

B: "I like the yellow. Can we go now?"

In the analysis part, participants listened to a paragraph explaining the concept of sentence stress using the examples from the conversation. For example, the participants were told that, when a speaker says, "I like short-sleeved shirts." with standard stress, there's no extra meaning and we don't know anything about the context. The sentence is neutral. However, when a speaker says, "I like *short*-sleeved shirts" with extra stress on the word "short," the speaker is making a contrast between *short*-sleeved and *long*-sleeved shirts. There is extra meaning and the sentence is contrastive.

Finally, the participants were asked to practice the use of sentence stress using some sentences provided (e.g., Yesterday we discussed the creation of Facebook. Today we'll discuss the marketing of Facebook).

The trans-MAET not only contained the content of the mono-MAET but also compared Mandarin and English sentence stress by providing literal translation of all the examples in the mono-MAET.

RESULTS

Participants' speech was analyzed using the speech analysis software Praat. The analysis focused on the pitch height of 18 contrastive stress words in the passage: "individualism, personal-1, group-1, collectivism, group-2, personal-2, coworkers, longer, you, shorter, collectivist, give in, individualist, go against, upper, lower, top, bottom".

Cruz-Ferreira (1987) found that L2 speakers use "the pitch height strategy" as an interpretive strategy for intonational meaning. She stated that "where the meaning contrast conveyed by intonation in L2 can be associated with broadly similar uses of pitch contours or pitch height in L1, 'abstract' generalizations regarding meaning seem to be made…" (p. 115). In this study, pitch height was also used as an indicator of the participants' use of sentence stress. Because the minimum pitch level measured by computer software might be skewed due to the existence of creaky voice, pitch height in this study was measured by subtracting the average pitch level of the whole passage from the maximum pitch level of the stressed constituents (see Figure 1). For each word analyzed, the maximum and average pitch level (in semitones) was obtained using the built-in pitch elicitation function of Praat. To make comparisons between speakers of different genders and ages, the pitch of the stressed words was analyzed in semitones relative to 100 Hz.

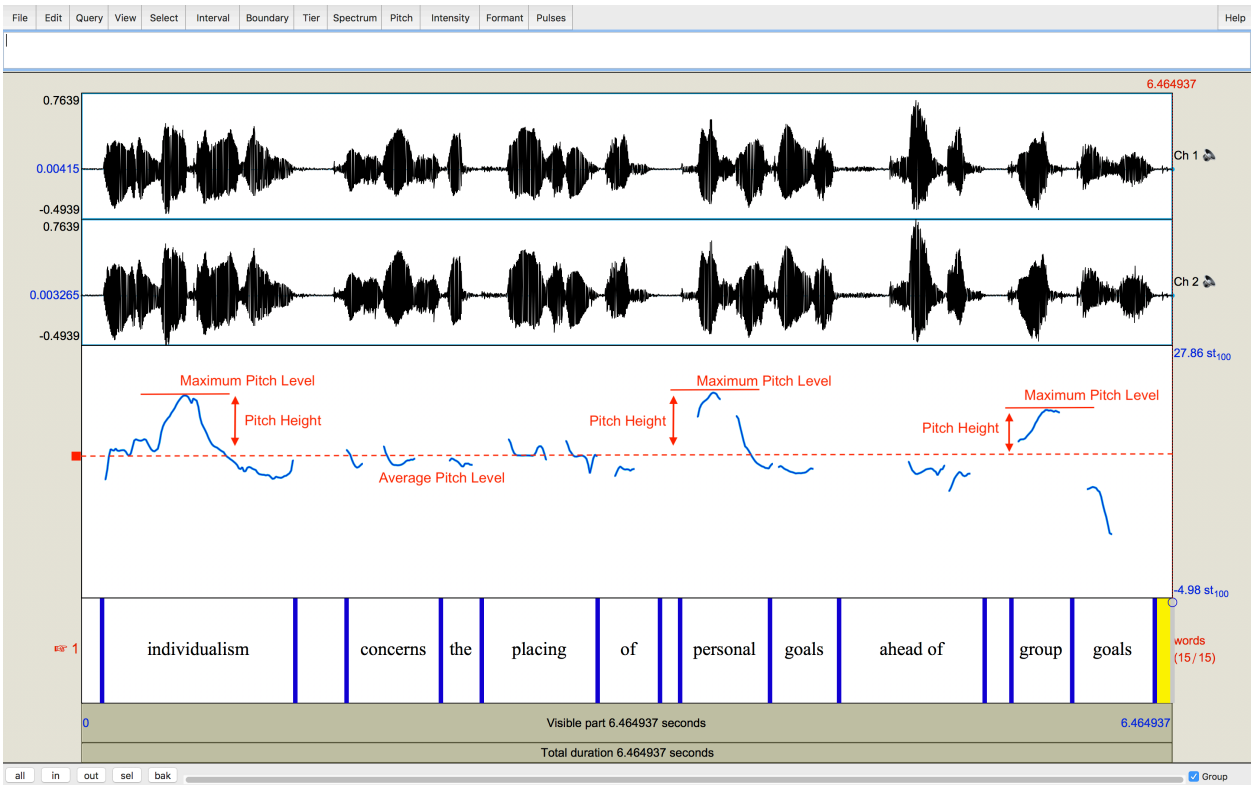

Figure 1. Pitch Height Measurement

The average pitch height of the stressed constituents in the participants' pretest and posttest speech was compared using the data analysis function of the software R (R Core Team, 2017). The average pitch height of the stressed constituents in Group 1 and Group 2 participants' speech both increased after the intervention. The pitch height of Group 2 (trans-MAET) had the biggest increase. The pitch height of the stressed constituents in Group 3 (control group), however, slightly decreased after the intervention (see Figure 2). Based on Pickering (2001)'s finding that Mandarin speaking L2 English speakers tend to use a "flat" pitch contour, the increase of the pitch height of the stressed constituents is considered as an enhancement of participants' ability to signal sentence stress.

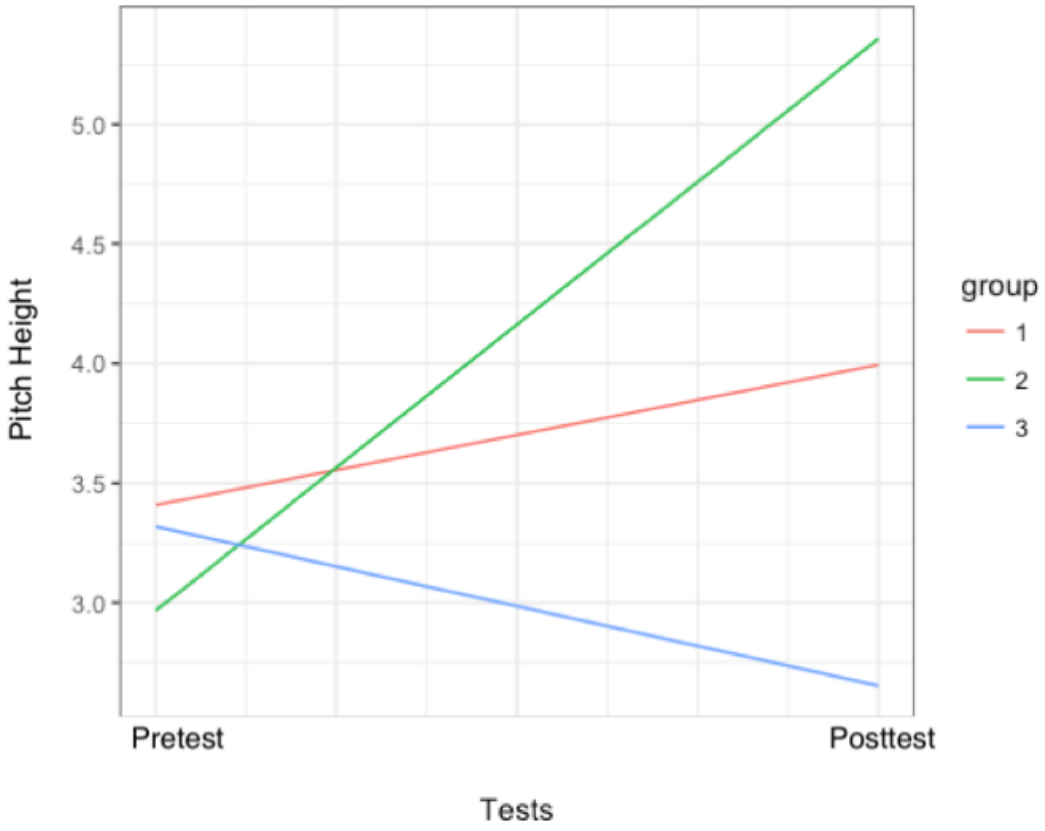

Figure 2. Average Pitch height of the stressed constituents

Pitch height of the stressed constituents was then analyzed using the linear mixed-effects model. The results show that the increase of the pitch height of the participants in Group 2 (trans-MAET) was statistically significant (t=7.474, df=4, p=.0017). The increase of the pitch height of the participants in Group 1 (mono-MAET) was not statistically significant (t=2.262, df=4, p=.0865). The decrease of the pitch height of the participants in Group 3 (control group) was not statistically significant (t=-2.205, df=4, p=.0921). (see Figure 3).

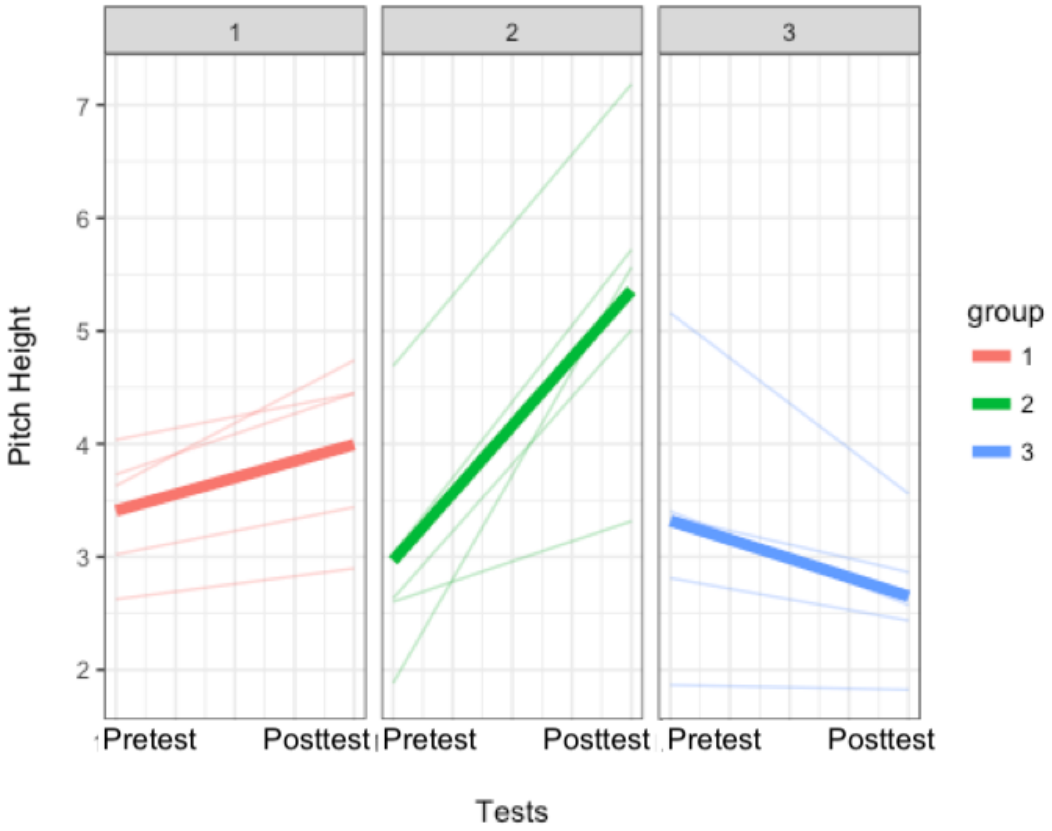

Figure 3. Linear regression of the pitch height of the stressed words.

DISCUSSION AND CONCLUSION

Some researchers suggested that Mandarin's tone system may interfere with the learning of English prosody for L2 English speakers (Clennell, 1997). However, this study finds that prosody instruction comparing Mandarin and English sentence stress (i.e. trans-MAET) increased the pitch height of Mandarin-speaking L2 English speakers' stressed constituents. This result suggests that Mandarin has some prosodic functions that can be transferred to English, which may facilitate learners' English prosody learning.

Reed and Michaud (2015) argued that metalinguistic awareness is the key to prosody teaching. This study supports their argument by showing that even a 20 minutes instruction focusing on metalinguistic awareness can be very effective. Metalinguistic awareness based instruction may be effective for two reasons. First, enhancing metalinguistic awareness seemed to help learners to understand the importance of English prosody and provides learners a motivation to use prosody in their daily lives. Second, raising learners' metalinguistic awareness helps learners to pay more attention to sentence stress, which may promote learners' "noticing" (Schmidt, 1990) in language learning.

This study finds that the pitch height of the stressed constituents of the trans-MAET group has a statistically significant increase whereas the increase of the mono-MAET group was not statistically significant, suggesting that trans-MAET is more effective than mono-MAET. This result has two implications. First, this result reveals a limitation of mono-MAET: because of the

dynamic nature of prosody, learners could not memorize the pitch contour of each word and apply it to every sentence. Prompting the subjects to transfer similar prosodic functions/usages from their L1s can not only help them to understand the importance of prosody in English but also pick up the usage of English prosody by transferring prosodic usage from their L1s. Second, this result supports the translanguaging approach in prosody teaching: enhancing L2 English speakers' awareness of the similarities between Mandarin and English sentence stress may allow them to elicit prosody usage from their repertoire of languaging practices and apply to English.

This study shows that even though the pitch contours of Mandarin and English stressed constituents are different, both languages use increased pitch height to signal sentence stress. This result requires researchers and teachers to address the complexity of prosody and avoid overgeneralization of certain prosodic features. This result also suggests that more cross-linguistic research studies analyzing prosodic features from different perspectives should be conducted.

The results of this study also require teachers to take learners' L1s prosody into consideration when teaching English prosody. However, although some scholars discussed positive and negative transfer across languages, information regarding how each prosodic feature is used in different languages is not easily accessible to teachers. Teaching materials concluding cross-linguistic research findings are needed.

This study has certain limitations. First, the study had a limited number of participants. Follow-up studies should expand the number of participants to confirm the findings of this study. Furthermore, this study only investigated the pitch height of the stress words. Follow-up studies should investigate other prosodic features of the stressed and unstressed constituents including pitch range, duration, and intensity. Finally, this study used a read-aloud task to elicit data. Future study should investigate the efficacy of the proposed teaching methods using tasks eliciting spontaneous speech.

Overall, in investigating the efficacy of two pedagogy for prosody teaching, this study offers a possible innovation in teaching approach to pronunciation teachers and sheds light on possible future research avenue.

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Di Liu is doctoral fellow at Boston University. He earned his MA degree on TESOL from New York University and is working with Dr. Marnie Reed on applied phonology and Computer-Assisted Language Learning. He has taught English in various contexts and has been working on several research projects including (1) technology-enhanced pronunciation research and teaching, (2) cross-linguistic investigation of Mandarin and English prosody, (3) constraints on intonation as a function of tone inventory structure, and (4) neurocognitive investigation of prosodic features. He has presented his studies at various conferences including TESOL, AAAL, WATESOL and PSLLT conference.

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REFERENCES

Anderson-Hsieh, J., Johnson, R., & Koehler, K., (1992). The relationship between native speaker judgments of nonnative pronunciation and deviance in segmentals, prosody, and syllable structure. *Language Learning 42,* 529–555.

Boersma, P. (2001). Praat, a system for doing phonetics by computer. *Glot International* 5:9/10, 341-345.

Celce-Murcia, M., Brinton, D., & Goodwin, J. M. (2010). *Teaching pronunciation: A course book and reference guide*. New York: Cambridge University Press.

Chen, Y., & Gussenhoven, C. (2008). Emphasis and tonal implementation in Standard Chinese. *Journal of Phonetics*, *36*(4), 724-746.

Clennell, C. (1997). Raising the pedagogic status of discourse intonation teaching. *ELT Journal, 51*(2), 117-25.

Cruz-Ferreira, M. (1987). Non-native interpretive strategies for intonational meaning: An experimental study. *Sound Patterns in Second Language Acquisition*, 103-120.

Derwing, T. M., Munro, M. J., & Wiebe, G. (1998). Evidence in favor of a broad framework for pronunciation instruction. *Language Learning*, *48*(3), 393-410.

García, O., and Li, W. (2014). *Translanguaging: Language, bilingualism and education*. New York: Palgrave Macmillan.

Gilbert, J. (2014). Myth 4: Intonation is Hard to Teach In L. Grant (Ed.), *Pronunciation myths: Applying second language research to classroom teaching*. (pp. 107-136). Ann Arbor, MI: University of Michigan Press:

Hahn, L. D. (2004). Primary stress and intelligibility: research to motivate the teaching of suprasegmentals. *TESOL Quarterly, 38*(2)*,* 201-223.

Ip, M. H. K., & Cutler, A. (2016) Cross-language data on five types of prosodic focus. Proc. Speech Prosody 2016, 330-334. doi: 10.21437/SpeechProsody.2016.

Li, W. (2011) Moment analysis and translanguaging space: Discursive construction of identities by multilingual Chinese youth in Britain. *Multilingual Structures and Agencies, 43* (5), 1222–1235.

Mazak, C. M. (2017). Introduction: Theorizing Translanguaging Practices in Higher Education. In C. M. Mazak & K. S. Carroll (Eds.), *Translanguaging in higher education: Beyond monolingual ideologies.* (pp. 1-10). Bristol; Blue Ridge Summit, PA: Multilingual Matters.

Ouyang, I. C., and Kaiser, E. (2015). Prosody and information structure in a tone language: An investigation of Mandarin Chinese. *Language, Cognition and Neuroscience*, *30*(1-2), 57-72.

Pickering, L. (2001). The role of tone choice in improving ITA communication in the classroom. *TESOL Quarterly, 35*, 233-255.

R Core Team (2017). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.

Reed, M., & Michaud, C. (2005). *Sound concepts: An integrated pronunciation course*. New York: McGraw-Hill.

Reed, M., & Michaud, C. (2015). Intonation in research and practice: The importance of metacognition. In M., Reed & J. Levis (Eds.), *The handbook of English pronunciation*. (pp. 454-470). West Sussex: UK: John Wiley & Sons.

Schmidt, R. W. (1990). The role of consciousness in second language learning1. *Applied linguistics*, *11*(2), 129-158.

Trofimovich, P., Kennedy S., & Foote, J. (2015). Variables affecting L2 pronunciation development. In M. Reed & J. Levis (Eds.) *The handbook of English pronunciation* (pp. 353-373), West Sussex, UK: John Wiley & Sons, Inc.

Wennerstrom, A. (1998). Intonation as cohesion in academic discourse: A study of Chinese speakers of English. *Studies in Second Language Acquisition, 20* (1), 1-25.

Williams, C. (1996) Secondary education: Teaching in the bilingual situation. In C. Williams, G. Lewis and C. Baker (Eds.), *The Language Policy: Taking Stock* (pp. 193–211). Llangefni: CAI.

APPENDIX: Read Aloud PASSAGE

I will start by defining the topic for today, which is individualism and collectivism. Individualism concerns the placing of personal goals ahead of group goals. And collectivism concerns placing group goals ahead of personal goals. So let's suppose you have a conflict at work about break time. Let's say your co-workers want longer breaks, but you want shorter breaks. If you're a collectivist, you'll give in to the group. But if you're an individualist, you'll go against the group.

First of all, there are many determinants of individualism and collectivism. Culture is a determinant, but it's only one of the determinants. But let me start with culture. Basically, the European cultures, particularly those in northwestern Europe, are highly individualistic. England is in northwest Europe, and it's typical of the individualist pattern. And the East Asian cultures, such as China and Japan, are much more typical of the collectivist pattern. But in between, you have different combinations of the patterns. And I'll discuss that in a minute. But let me mention some other determinants of individualism and collectivism.

One determinant that's very important is social class. There's a tendency for the upper classes to be more individualistic than the lower classes. In other words, people at the top of a social structure are more likely to think and behave like an individualist than those near the bottom of the structure. For example, if you look at the history of China, the emperor of China is more individualistic than the working class in China. So certain classes in a culture may be more individualistic than the entire population in a culture.